

WHAT IS CLAIMED IS:

1. (canceled)
2. (previously presented) The adjusting device according to claim 18, further comprising a locking disk fastened on the stator, wherein the locking bore is provided in the locking disk.
3. (previously presented) The adjusting device according to claim 18, wherein the locking bore is elongate in a rotational direction of the rotor.
4. (previously presented) The adjusting device according to claim 19, wherein the locking element has an end face facing the locking bore and wherein the end face is loaded by the pressure medium.
5. (previously presented) The adjusting device according to claim 19, wherein the locking element is movable against a counterforce out of the locking position into the release position.
6. (previously presented) The adjusting device according to claim 18, further comprising at least one pressure spring generating the counterforce.
7. (previously presented) The adjusting device according to claim 18, wherein the locking element is a hollow piston.
8. (previously presented) The adjusting device according to claim 18, wherein the locking element is arranged to be slidable within a bore provided in a first one of the vanes of the rotor.
9. (previously presented) The adjusting device according to claim 2, wherein the locking element has an end positioned in a bore of a first vane of the rotor, wherein the end of the locking element has an annular piston surface loadable by the pressure medium.
10. (original) The adjusting device according to claim 9, wherein the end of the locking element has a radially outwardly oriented flange and wherein the annular piston surface is provided on the radially outwardly oriented flange.
11. (previously presented) An adjusting device for camshafts of motor vehicles, comprising:
a stator having radial inwardly projecting stays;

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a rotor having vanes projecting into spaces defined between the stays of the stator and dividing the spaces into pressure chambers;

wherein the rotor is rotatable relative to the stator and wherein the vanes of the rotor are loadable on opposed sides with a pressure medium;

wherein the rotor is lockable relative to the stator in a locked position, wherein the stator has at least one locking bore and wherein the rotor has a locking element having a locking position in which the locking element engages the locking bore and locks the rotor in the locked position;

wherein the locking element is moveable from the locking position into a release position by the pressure medium supplied by a first supply groove and a second supply groove to independently load a first surface and a second surface of the at least one locking element, respectively;

wherein, when an engine of the motor vehicle is started with the locking element in the locking position, the second supply groove remains open and supplies the pressure medium to the second surface of the locking element, wherein the locking element remains in the locking position until a pressure of the pressure medium is greater than a counterforce force of the locking element forcing the locking element into the locking position;

wherein the locking element has an end positioned in a bore of a first vane of the rotor and provided with an annular piston surface loadable by the pressure medium;

wherein the vanes separate the spaces into a first pressure chamber and into a second pressure chamber, respectively, wherein the annular piston surface delimits axially an annular chamber, wherein the annular chamber is connected alternately by the first supply groove to the first pressure chamber or the second pressure chamber.

12. (original) The adjusting device according to claim 11, wherein the first supply groove is closed by the first vane of the rotor in the release position of the locking element.

13. (previously presented) The adjusting device according to claim 11, wherein the first supply groove is provided in a locking disk fastened to the stator.

14. (previously presented) The adjusting device according to claim 11,

wherein the second supply groove opens into the at least one locking bore and connects the at least one locking bore with the first pressure chamber or the second pressure chamber of the stator.

15. (original) The adjusting device according to claim 14, wherein the second supply groove is closable by the first vane of the rotor in the release position of the locking element.

16. (previously presented) The adjusting device according to claim 18, wherein the locking element is arranged to be slidable within a bore provided in a first one of the vanes of the rotor, wherein at least one of the spaces, neighboring the space where the first vane of the rotor is arranged, has at least two throttles for reducing a rotational speed of the rotor shortly before the locking element engages the at least one locking bore.

17. (original) The adjusting device according to claim 16, wherein the throttles are throttle grooves connecting a supply of the pressure medium with the at least one of the spaces.

18. (previously presented) An adjusting device for camshafts of motor vehicles, comprising:

a stator having radial inwardly projecting stays;
a rotor having vanes projecting into spaces defined between the stays of the stator, wherein the vanes separate the spaces into a first pressure chamber and into a second pressure chamber, respectively;

wherein the rotor is rotatable relative to the stator and wherein the vanes of the rotor are loadable on opposed sides with a pressure medium;

wherein the rotor is lockable relative to the stator in a locked position, wherein the stator has at least one locking bore and wherein the rotor has a locking element having a locking position in which the locking element engages the locking bore and locks the rotor in the locked position;

wherein the locking element is moveable from the locking position into a release position by the pressure medium supplied by a first supply groove and a second supply groove to independently load a first surface and a second surface of the at least one locking element, respectively;

wherein, when an engine of the motor vehicle is started with the locking element in the locking position, the second supply groove remains open and supplies the pressure medium to the second surface of the locking element, wherein the locking element remains in the locking position until a pressure of the pressure medium is greater than a counterforce force of the locking element forcing the locking element into the locking position,

wherein the first supply groove alternately connects the first surface to the first pressure chamber or the second pressure chamber.

19. (currently amended) An adjusting device for camshafts of motor vehicles, comprising:

a stator having radial inwardly projecting stays;

a rotor having vanes projecting into spaces defined between the stays of the stator;

wherein the rotor is rotatable relative to the stator and wherein the vanes of the rotor are loadable on opposed sides with a pressure medium;

wherein the rotor is lockable relative to the stator in a locked position, wherein the stator has a locking disk having at least one locking bore and wherein the rotor has a locking element having a locking position in which the locking element engages the locking bore and locks the rotor in the locked position;

wherein the locking element is moveable by the pressure medium from the locking position into a release position;

wherein the locking disk of the stator has first and second throttle grooves for reducing a speed of the rotor when approaching an area of the locking position of the locking bolt, wherein the first and second throttle grooves are arranged between stays of the stator so that the vanes of the rotor cover the first and second throttle grooves at least partially;

wherein the first and the second throttle grooves alternately communicate, depending on a rotational position of the rotor, with a throttle bore of the vanes of the rotor.